Regency
the first name in solid state

PROFESSIONAL
2 WAY action radio

DATE 6/2/82

SSC Service Bulletin

no. 82-245

TO: ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES & SERVICE CENTERS

ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES REPRESENTATIVES

MODELS AFFECTED: MCA611A

PROBLEM:
1. Errors in Service Manual
2. K1 jumper too short
3. Possibility of tone detector falsing with harmonics

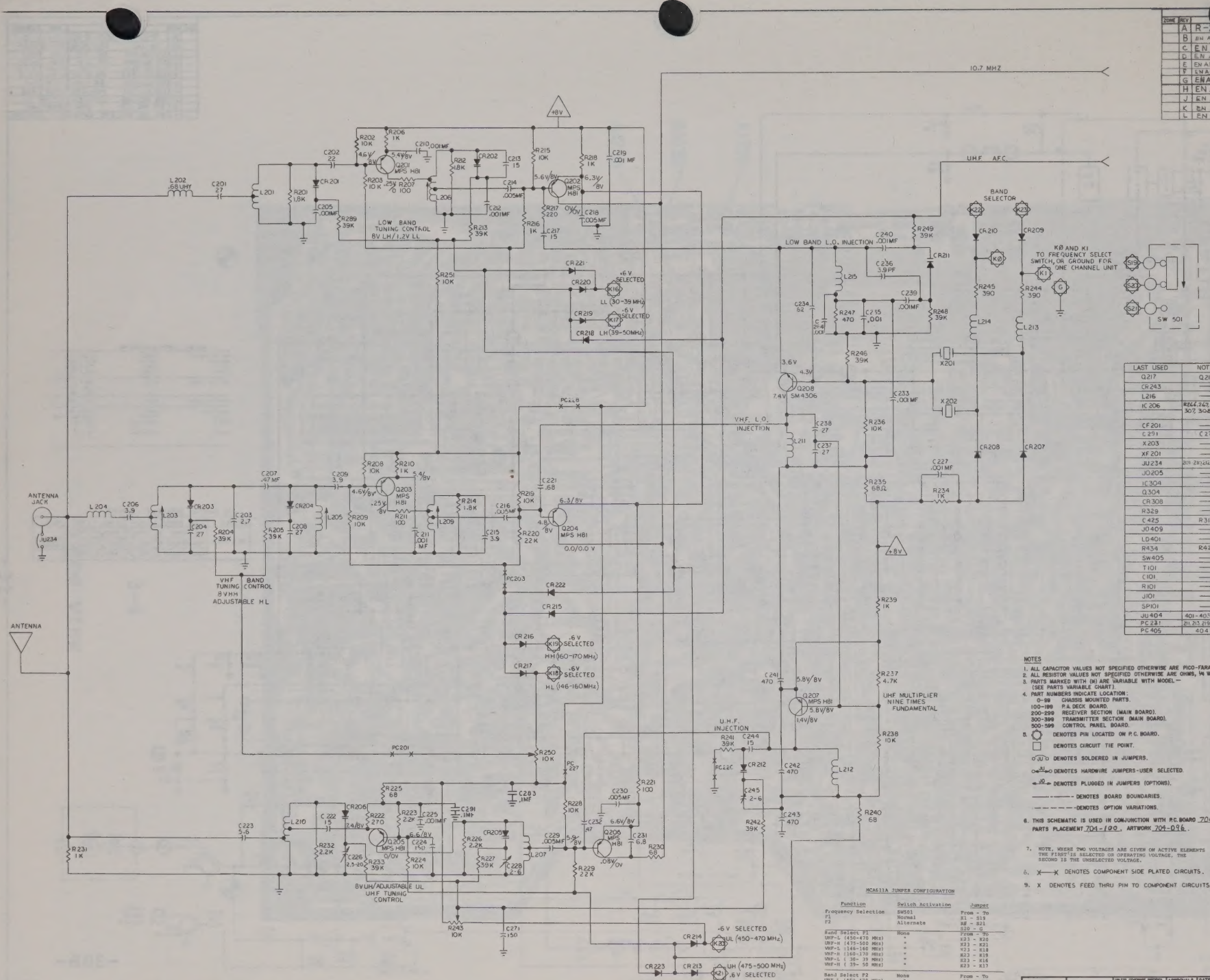
CURE:
1. Replace the following pages 30A, 30B, 31, 32, 34, 36, 37, 38, 39, 40, 45, and 47 in the Service Manual
2. Increase K1 jumper wire length to 4.5"
3. Add C425; change R415, C419 and C402

In detail the above changes are:

a. Delete CR230 and C217 on topside parts placement (P31, 32, 45, 47)
b. Show CR230 on bottom side connected to IC206, Pin 3 - not Pin 12 (P. 32)
c. Change R431 to R413 on topside parts placement (P. 31)
d. Change C267 from 0.2pF to 0.2mF (1502-0204-006) (P. 34)
e. Change R217 to 220 ohms (4704-0221-032) (P. 36)
f. Change R266, R315-R328 to "not used" (P. 37, 38)
g. Delete R435 (P. 39)
h. Add R329 = 10K (4704-0103-032) (P. 38)
i. Change R415 to 220K (4704-0224-032) (P. 39)
j. Add C425 = 0.1mF (1539-0104-706) in series with R412 (P. 40)
k. Change C402 to 2.2mF (1515-0229-002) (P. 39)
l. Change C419 to 1.0mF (1515-0010-003) (P. 40)

TECHNICAL SERVICE DEPARTMENT

REGENCY COMMUNICATIONS, INC.


10.7 MHZ
+8V
UHF AFC
BAND SELECTOR
LOW BAND L.O. INJECTION
K0 AND K1 TO FREQUENCY SELECT SWITCH, OR GROUND FOR ONE CHANNEL UNIT
SW 501
LOW BAND TUNING CONTROL 8V LH/1.2V LL
VHF L.O. INJECTION
ANTENNA JACK
ANTENNA
VHF TUNING 8 VHM ADJUSTABLE HL
BAND CONTROL
8V UH/ADJUSTABLE UL UHF TUNING CONTROL
U.H.F. INJECTION
UHF MULTIPLIER NINE TIMES FUNDAMENTAL
.6V SELECTED HH (160-170 MHz)
.6V SELECTED HL (146-160MHz)
.6V SELECTED LL (30-39 MHz)
.6V SELECTED LH (39-50MHz)
.6V SELECTED UL (450-470 MHz)
UH (475-500 MHz) .6V SELECTED

ZONE	REV			DATE	APPROVED
	A	R-2		6/9/80	CAP
	B	EN AB 396	LV.	11/28/80	CJH
	C	EN AB-629	SR	4-81	CJH
	D	EN AB-685	SR	4-81	CJH
	E	EN AB-923	GW RMR	8-26-81	CJH
	F	ENAC-023	SR 10-81	6/28/81	CJH
	G	ENAC-041	SR 11-81	11-10-81	CJH
	H	EN AC-101	RDR 12-81	12/28/81	RKL
	J	EN AC-143	SR 1-82	2-3-82	CJH
	K	EN AC 177	CM+C	2/24/82	RKL
	L	EN AC 250, 270	CM+C	MAY 82	SMA

LAST USED	NOT USED
Q217	Q210
CR243	—
L216	—
IC 206	R244, 247, 290, 291, 307, 308
CF201	—
C291	C277
X203	—
XF201	—
JU234	201-211, 212-218, 220-234
J0205	—
IC304	—
Q304	—
CR308	—
R329	—
C425	R313
J0409	—
L0401	—
R434	R423
SW405	—
T101	—
C101	—
R101	—
J101	—
SP101	—
JU404	401-403
PC231	211, 213, 219, 221, 229
PC405	404

NOTES
1. ALL CAPACITOR VALUES NOT SPECIFIED OTHERWISE ARE PICO-FARAD.
2. ALL RESISTOR VALUES NOT SPECIFIED OTHERWISE ARE OHMS, ¼ WATT.
3. PARTS MARKED WITH (M) ARE VARIABLE WITH MODEL — (SEE PARTS VARIABLE CHART).
4. PART NUMBERS INDICATE LOCATION:
   0-99 CHASSIS MOUNTED PARTS.
   100-199 P.A. DECK BOARD.
   200-299 RECEIVER SECTION (MAIN BOARD).
   300-399 TRANSMITTER SECTION (MAIN BOARD).
   500-599 CONTROL PANEL BOARD.
5. ○ DENOTES PIN LOCATED ON P.C. BOARD.
   □ DENOTES CIRCUIT TIE POINT.
   ○—○ DENOTES SOLDERED IN JUMPERS.
   ○—J1—○ DENOTES HARDWIRE JUMPERS-USER SELECTED.
   ←J0→ DENOTES PLUGGED IN JUMPERS (OPTIONS).
   —·—·— DENOTES BOARD BOUNDARIES.
   — — — — DENOTES OPTION VARIATIONS.
6. THIS SCHEMATIC IS USED IN CONJUNCTION WITH P.C. BOARD 704-097, PARTS PLACEMENT 704-100, ARTWORK 704-096.
7. NOTE, WHERE TWO VOLTAGES ARE GIVEN ON ACTIVE ELEMENTS THE FIRST IS SELECTED OR OPERATING VOLTAGE, THE SECOND IS THE UNSELECTED VOLTAGE.
8. X—X DENOTES COMPONENT SIDE PLATED CIRCUITS.
9. X DENOTES FEED THRU PIN TO COMPONENT CIRCUITS.

MCA611A JUMPER CONFIGURATION

Function	Switch Activation	Jumper
Frequency Selection F1	SW501 Normal	From - To J1 - S19
F2	Alternate	J18 - S21
		S20 - G
Band Select P1	None	From - To
UHF-L (450-470 MHz)	"	J23 - K20
UHF-H (475-500 MHz)	"	J23 - K21
VHF-L (146-160 MHz)	"	J23 - K18
VHF-H (160-170 MHz)	"	J23 - K19
VHF-L (30- 39 MHz)	"	J23 - K16
VHF-H (39- 50 MHz)	"	J23 - K17
Band Select P2	None	From - To
UHF-L (450-470 MHz)	"	J22 - K20
UHF-H (475-500 MHz)	"	J22 - K21
VHF-L (146-160 MHz)	"	J22 - K18
VHF-H (160-170 MHz)	"	J22 - K19
VHF-L (30- 39 MHz)	"	J22 - K16
VHF-H (39- 50 MHz)	"	J22 - K17

-30A-

NEXT ASSY	USED ON
APPLICATION	DO NOT SCALE DWG.

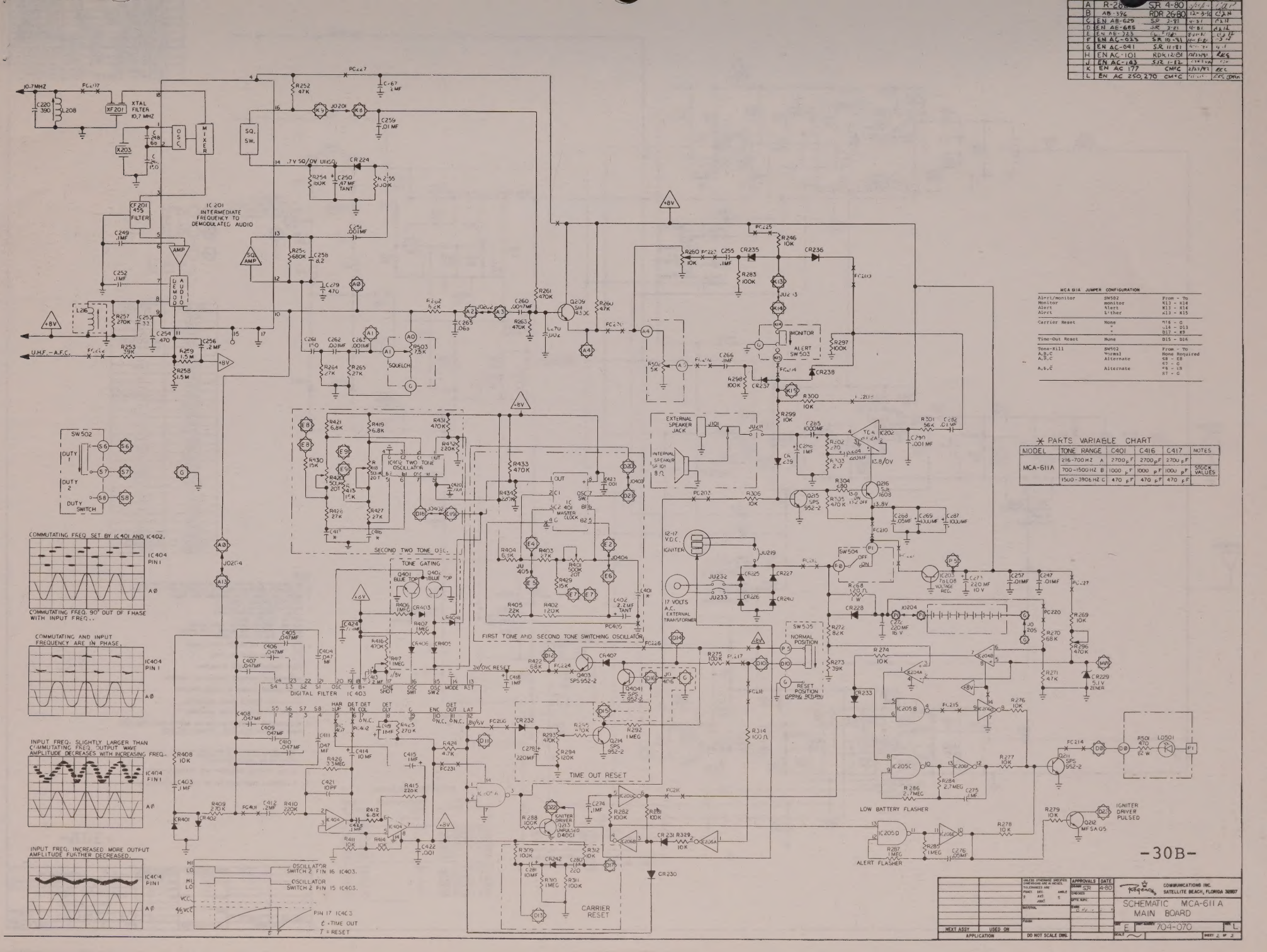
APPROVALS	DATE
SR	4-80
CHECKED	
QUAL. SUPV.	
ENGR.	

COMMUNICATIONS INC. SATELLITE BEACH, FLORIDA 32937

SCHEMATIC MCA 611 A MAIN BOARD

704-070 E L

SHEET 1 OF 2


IC 201 INTERMEDIATE FREQUENCY TO DEMODULATED AUDIO
SECOND TWO TONE OSC.
TONE GATING
FIRST TONE AND SECOND TONE SWITCHING OSCILLATOR
DIGITAL FILTER IC 403
TIME OUT RESET
CARRIER RESET
LOW BATTERY FLASHER
ALERT FLASHER
IGNITER DRIVER PULSED
MONITOR ALERT SW 503
EXTERNAL SPEAKER JACK
INTERNAL SPEAKER SP 101 8Ω
SQUELCH
NORMAL POSITION
RESET POSITION (SPRING RETURN)
COMMUTATING FREQ. SET BY IC401 AND IC402.
COMMUTATING FREQ. 90° OUT OF PHASE WITH INPUT FREQ..
COMMUTATING AND INPUT FREQUENCY ARE IN PHASE.
INPUT FREQ. SLIGHTLY LARGER THAN COMMUTATING FREQ. OUTPUT WAVE AMPLITUDE DECREASES WITH INCREASING FREQ..
INPUT FREQ. INCREASED MORE OUTPUT AMPLITUDE FURTHER DECREASED.
OSCILLATOR SWITCH 2 PIN 16 IC403.
OSCILLATOR SWITCH 2 PIN 15 IC403.
PIN 17 IC403
t = TIME OUT
T = RESET

A	R-26	SR 4-80	4-80	CJH
B	AB-396	RDR 26-80	12-3-80	CJH
C	EN AB-629	SP 2-81	4-3-81	MJH
D	EN AE-685	SR 3-81	4-8-81	MJH
E	EN AE-723	SR 5-81	5-11-81	MJH
F	EN AC-023	SR 10-81	10-5-81	MJH
G	EN AC-041	SR 11-81	11-20-81	MJH
H	EN AC-101	RDR 12-81	12-31-81	REG
J	EN AC-183	SR 1-82	1-19-82	MJH
K	EN AC 177	CMFC	2-23-82	REG
L	EN AC 250, 270	CM*C	11-1-82	REG DRN

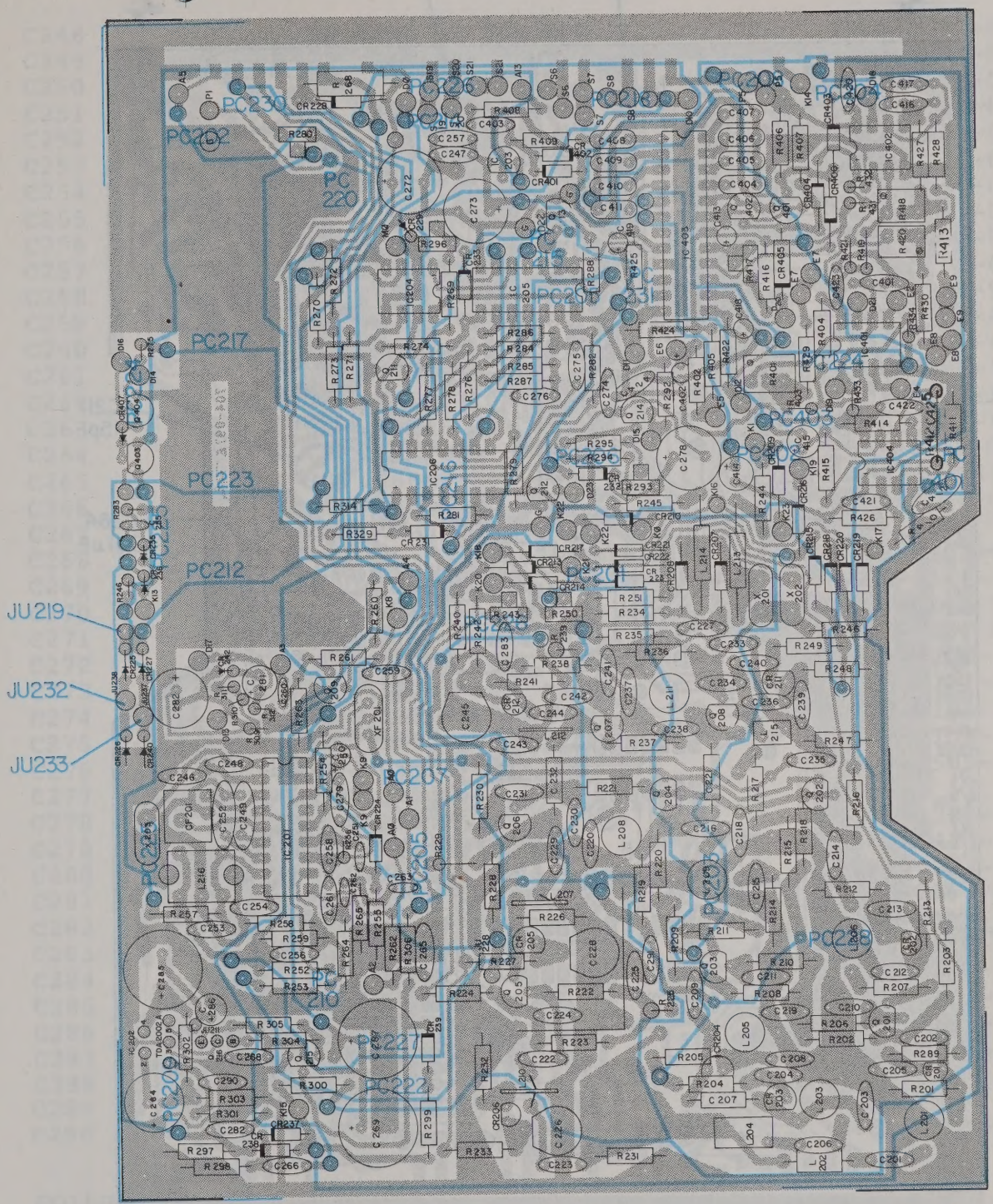
MCA 611A JUMPER CONFIGURATION

Alert/monitor	SW502	From - To
Monitor	normal	K13 - K14
Alert	Alternate	K13 - K14
Alert	Either	K13 - K15
Carrier Reset	None	K16 - G
	"	J14 - D13
	"	D17 - K9
Time-Out Reset	None	D15 - D16
Tone-Kill	SW502	From - To
A,B,C	Normal	None Required
A,B,C	Alternate	S8 - E8
		S7 - G
A,B,C	Alternate	S8 - L9
		S7 - G

* PARTS VARIABLE CHART

MODEL	TONE RANGE	C401	C416	C417	NOTES
MCA-611A	216-700 HZ A	2700 pF	2700 pF	2700 pF	SHOW VALUES
	700-1500 HZ B	1000 pF	1000 pF	1000 pF	
	1500-3906 HZ C	470 pF	470 pF	470 pF	

NEXT ASSY	USED ON	APPROVALS	DATE	COMMUNICATIONS INC. SATELLITE BEACH, FLORIDA 32937
APPLICATION	DO NOT SCALE DWG.	DRAWN CJH	4-80	SCHEMATIC MCA-611A MAIN BOARD
		CHECKED		SIZE E, PART NUMBER 704-070, REV L
		QUAL. APPV.		SCALE, SHEET 2 OF 2
		MFG		



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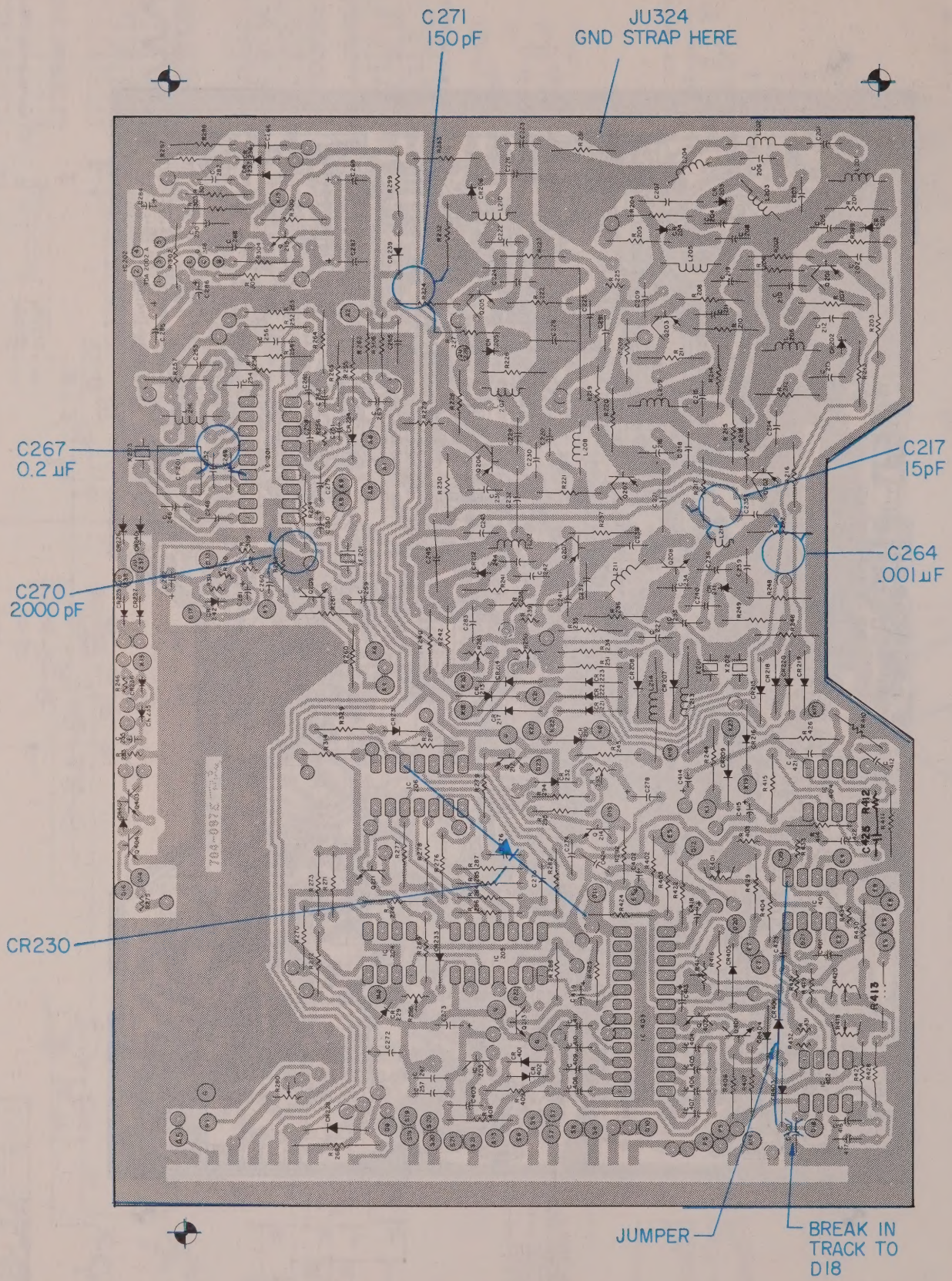
TOP VIEW



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BOTTOM VIEW

LOCATION	DESCRIPTION	PART NUMBER
C248	RD 68pf 5% 50V NPO	1524-0680-002
C249	CD .1mf +8-2 50V	1503-0104-010
C250	Tant .47mf 20% 15V	1515-0478-003
C251	MY .001mf 10% 100V	1508-0102-610
C252	CD .1mf +8-2 50V	1503-0104-010
C253	CD 33pf 10% 500V NPO	1500-0330-605
C254	CD 470pf 20% 50V	1523-0471-002
C255	CD .1mf +80-20 12V	1502-0104-006
C256	MC .2mf +8-2 12V	1502-0204-006
C257	CD .01mf +8-2 50V	1503-0103-007
C258	CD 8.2pf 10% 500V NPO	1500-0829-905
C259	CD .01mf +8-2 50V	1503-0103-007
C260	MY .0047mf 10% 100V	1508-0472-610
C261	SM 150pf 5% 50V	1506-0151-550
C262	MY .001mf 10% 100V	1508-0102-610
C263	MY .001mf 10% 100V	1508-0102-610
C264	CD .001 +80-20, 50V	1503-0102-003
C265	MY .068mf 10% 100V	1508-0683-610
C266	CD .1mf +8-2 50V	1503-0104-010
C267	CD 0.2mf +80-20 12V BC	1502-0204-006
C268	CD .05mf +8-2 25V	1501-0503-003
C269	E U 1000mf 16V	1513-0102-002
C270	CD .002 Z5F 50V 20%	1523-0202-002
C271	CD 150pF 20% 50V	1523-0151-002
C272	E U 220mf 16V	1513-0221-002
C273	E U 220mf 10V	1513-0221-001
C274	CD .1mf +80-20 12V	1502-0104-006
C275	CD .1mf +80-20 12V	1502-0104-006
C276	CD .05mf +8-2 25V	1501-0503-003
C277	not used	
C278	E U 220mf 16V	1513-0221-002
C279	SM 470pf 5% 50V	1506-0471-550
C280	E U 220mf 10V	1513-0221-001
C281	E U 10mf 10V	1513-0100-001
C282	CD .01mf 50V Z5U	1503-0103-007
C283	CD .1mf +80-20 12V	1503-0104-001
C284	E U 220mf	1513-0221-002
C285	E U 1000mf 16V	1513-0102-002
C286	E U 1mf 16V	1513-0010-002
C287	E U 1000mf 16V	1513-0102-002
C288	not used	
C289	not used	
C290	CD .005 +8-2 50V	1501-0503-003
COILS		
L201	coil	1800-3152-013
L202	choke .68 uhy Wilco	1802-0688-003
L203	coil TMRH RF Ant	1800-3152-001
L204	choke LM-2	1803-5125-903
L205	coil RF Input	1800-3152-002
L206	coil	1800-3152-012
L207	coil	1800-3160-006
L208	coil RF (wht)	1800-3191-401

LOCATION	DESCRIPTION	PART NUMBER
CR242	diode sil IN4148	4806-1241-200

TRANSISTORS

Q201	MPS H81 PNP	4801-0000-026
Q202	MPS H81 PNP	4801-0000-026
Q203	MPS H81 PNP	4801-0000-026
Q204	MPS H81 PNP	4801-0000-026
Q205	MPS H81 PNP	4801-0000-026
Q206	MPS H81 PNP	4801-0000-026
Q207	MPS H81 PNP	4801-0000-026
Q208	NPN SM43065	4801-0000-100
Q209	SPS-952-2	4801-0000-016
Q210	not used	
Q211	SPS-952-2	4801-0000-016
Q212	MPS A05	4801-0000-005
Q213	MPS A05	4801-0000-005
Q214	SPS-952-2	4801-0000-016
Q215	SPS-952-2	4801-0000-016
Q216	Pwr SJE 1608	4802-0000-003

INTEGRATED CIRCUITS

IC201	IF Sub Sys	3130-6056-500
IC202	TDA 2002AV	3130-5407-602
IC203	78-L08 8V Reg 10	3130-0000-014
IC204	LM358N	3130-3167-909
IC205	MC14011CP	3130-3157-628
IC206	MM74C04N	3130-3157-617

RESISTORS (All resistors are ¼ watt 5% unless otherwise noted)

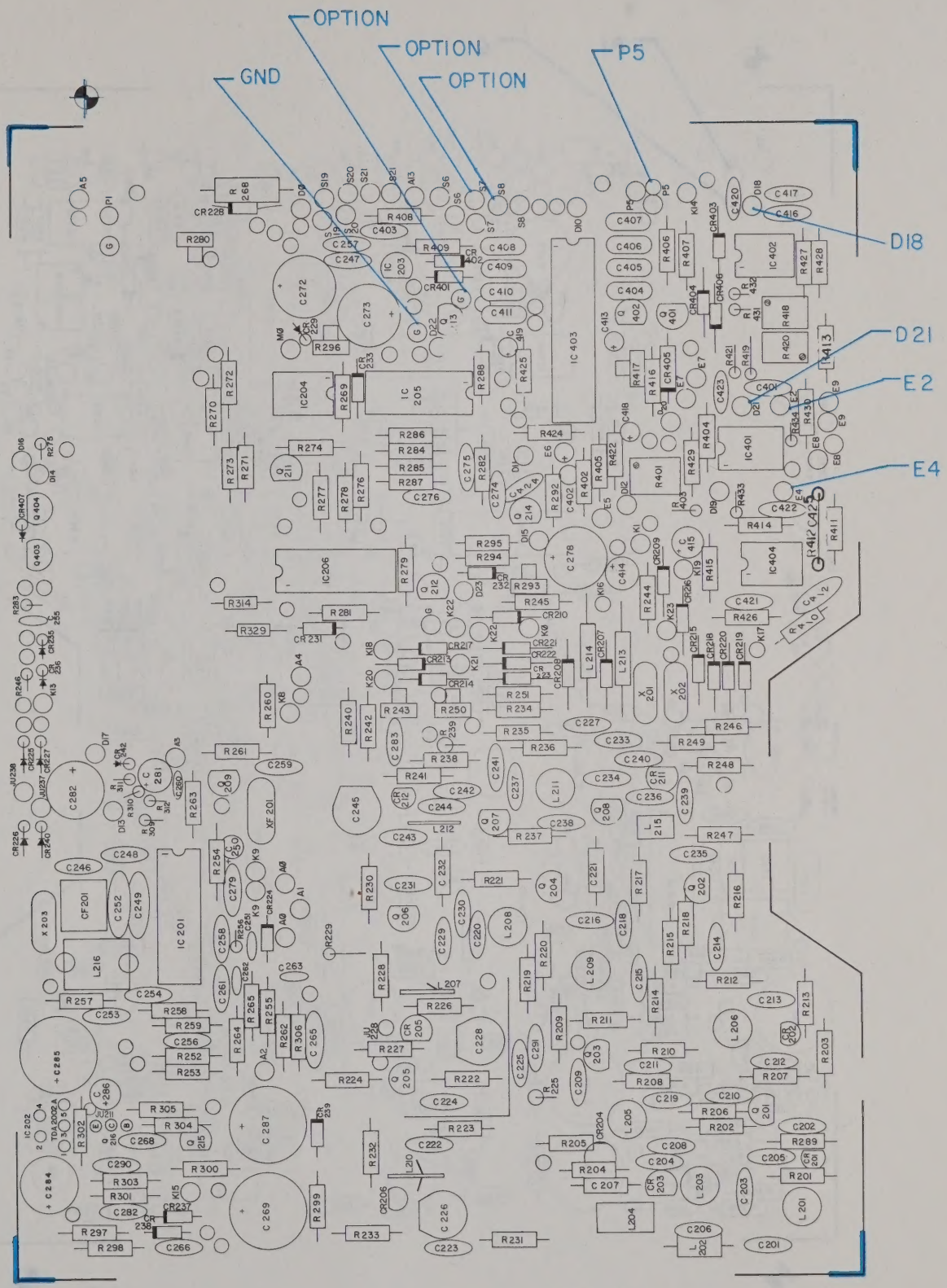
R201	1.8K ohm	4704-0182-032
R202	10K ohm	4704-0103-032
R203	10K ohm	4704-0103-032
R204	39K ohm	4704-0393-032
R205	39K ohm	4704-0393-032
R206	1K ohm	4704-0102-032
R207	100 ohm	4704-0101-032
R208	10K ohm	4704-0103-032
R209	10K ohm	4704-0103-032
R210	1K ohm	4704-0102-032
R211	100 ohm	4704-0101-032
R212	1.8K ohm	4704-0182-032
R213	39K ohm	4704-0393-032
R214	1.8K ohm	4704-0182-032
R215	10K ohm	4704-0103-032
R216	22K ohm	4704-0223-032
R217	220 ohm	4704-0221-032

LOCATION	DESCRIPTION	PART NUMBER
R218	1K ohm	4704-0102-032
R219	10K ohm	4704-0103-032
R220	22K ohm	4704-0223-032
R221	100 ohm	4704-0101-032
R222	270 ohm	4704-0271-032
R223	2.2K ohm	4704-0222-032
R224	10K ohm	4704-0103-032
R225	68 ohm	4704-0680-032
R226	2.2K ohm	4704-0222-032
R227	39K ohm	4704-0393-032
R228	10K ohm	4704-0103-032
R229	22K ohm	4704-0223-032
R230	68 ohm	4704-0680-032
R231	1K ohm	4704-0102-032
R232	2.2K ohm	4704-0222-032
R233	39K	4704-0393-032
R234	1K ohm	4704-0102-032
R235	68 ohm	4704-0680-032
R236	10K ohm	4704-0103-032
R237	4.7K ohm	4704-0473-032
R238	10K ohm	4704-0103-032
R239	1K ohm	4704-0102-032
R240	68 ohm	4704-0680-032
R241	39K ohm	4704-0393-032
R242	39K ohm	4704-0393-032
R243	10K var	4751-0103-002
R244	390 ohm	4704-0391-032
R245	330 ohm	4704-0331-032
R246	39K ohm	4704-0393-032
R247	470 ohm	4704-0471-032
R248	39K ohm	4704-0393-032
R249	39K ohm	4704-0393-032
R250	10K var	4751-0103-002
R251	10K ohm	4704-0103-032
R252	47K ohm	4704-0473-032
R253	39K ohm	4704-0393-032
R254	180K ohm	4704-0184-032
R255	100K ohm	4704-0104-032
R256	680K ohm	4704-0684-032
R257	270K ohm	4704-0274-032
R258	1.5 meg ohm	4704-0155-032
R259	1.5 meg ohm	4704-0155-032
R260	47K ohm	4704-0473-032
R261	470K ohm	4704-0474-032
R262	8.2K ohm	4704-0822-032
R263	470K ohm	4704-0474-032
R264	27K ohm	4704-0273-032
R265	27K ohm	4704-0273-032
R266	not used	
R267	not used	
R268	120 ohm ½W 5%	4704-0121-034
R269	10K ohm	4704-0103-032
R270	68K ohm	4704-0683-032

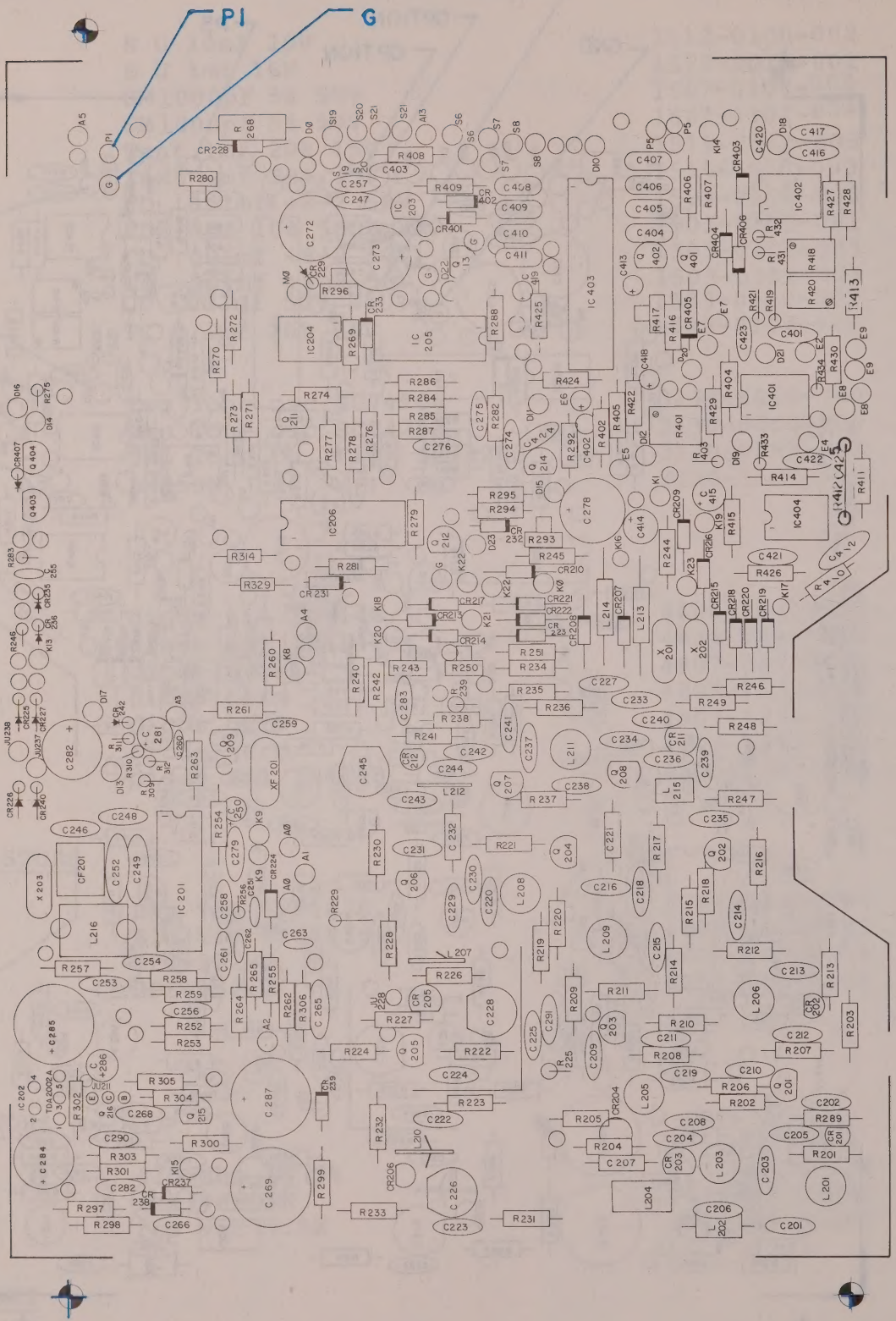
LOCATION	DESCRIPTION	PART NUMBER
R271	47K ohm	4704-0474-032
R272	82K ohm	4704-0823-032
R273	39K ohm	4704-0393-032
R274	10K ohm	4704-0103-032
R275	100K ohm	4704-0104-032
R276	10K ohm	4704-0103-032
R277	10K ohm	4704-0103-032
R278	10K ohm	4704-0103-032
R279	10K ohm	4704-0103-032
R280	10K var	4751-0103-002
R281	100K ohm	4704-0104-032
R282	100K ohm	4704-0104-032
R283	100K ohm	4704-0104-032
R284	2.7 meg ohm	4704-0275-032
R285	1 meg ohm	4704-0105-032
R286	2.7 meg ohm	4704-0275-032
R287	1 meg ohm	4704-0105-032
R288	10K ohm	4704-0103-032
R289	39K ohm	4704-0393-032
R290	not used	
R291	not used	
R292	1 meg ohm	4704-0105-032
R293	470K var	4571-0474-002
R294	120K ohm	4704-0124-032
R295	470K ohm	4704-0474-032
R296	470K var	4751-0474-002
R297	100K	4704-0104-032
R298	100K	4704-0104-032
R299	10K ohm	4704-0103-032
R300	10K ohm	4704-0103-032
R301	120K ohm	4704-0124-032
R302	270 ohm	4704-0271-032
R303	2.7 ohm	4704-0270-032
R304	680 ohm	4704-0681-032
R305	470K	4704-0474-032
R306	10K ohm	4704-0103-032
R307	not used	
R308	not used	
R309	100K ohm	4704-0104-032
R310	1 meg ohm	4704-0105-032
R311	100K ohm	4704-0104-032
R312	10K ohm	4704-0103-032
R313	not used	
R314	100 ohm	4704-0101-032
R315 - R328	not used	
R329	10K ohm	4704-0103-032

LOCATION	DESCRIPTION	PART NUMBER
RESISTORS (All resistors are ¼W 5% unless otherwise noted)		
R401	100K var	4751-5429-006
R402	120K ohm	4704-0124-032
R403	27K ohm	4704-0273-032
R404	6.8K ohm	4704-0682-032
R405	22K ohm	4704-0223-032
R406	1 meg	4704-0105-032
R407	1 meg	4704-0105-032
R408	10K ohm	4704-0103-032
R409	270K	4704-0274-032
R410	220K ohm	4704-0224-032
R411	10K ohm	4704-0103-032
R412	6.8K ohm	4704-0682-032
R413	15K ohm	4704-0153-032
R414	10K ohm	4704-0103-032
R415	220K	4704-0224-032
R416	470K	4704-0474-032
R417	1 meg var Mepco	4751-0105-002
R418	100K var	4751-5429-006
R419	6.8K ohm	4704-0682-032
R420	100K var	4751-5429-006
R421	6.8K ohm	4704-0682-032
R422	68K ohm	4704-0683-032
R423	not used	
R424	4.7K ohm	4704-0472-032
R425	270K	4704-0274-032
R426	3.3 meg ohm	4704-0335-032
R427	27K ohm	4704-0273-032
R428	27K ohm	4704-0273-032
R429	15K	4704-0153-032
R430	15K	4704-0153-032
R431	470K ohm	4704-0474-032
R432	220K ohm	4704-0224-032
R433	470K ohm	4704-0474-032
R434	220K ohm	4704-0224-032
CAPACITORS		
C401	SM1000pf 5% 50V	1507-0102-004
C402	Tant 2.2mf 20% 10V	1515-0229-002
C403	CD .1mf +8-2 50V	1503-0104-010
C404	MY .047mf 10% 100V	1508-0473-610
C405	MY .047mf 10% 100V	1508-0473-610
C406	MY .047mf 10% 100V	1508-0473-610
C407	MY .047mf 10% 100V	1508-0473-610
C408	MY .047mf 10% 100V	1508-0473-610
C409	MY .047mf 10% 100V	1508-0473-610
C410	MY .047mf 10% 100V	1508-0473-610
C411	MY .047mf 10% 100V	1508-0473-610
C412	MC .2mf +8-2 12V BC12	1502-0204-006
C413	Tant 2.2mf 20% 10V	1515-0229-002

LOCATION	DESCRIPTION	PART NUMBER
C414	E U 10mf 10V	1513-0100-002
C415	E U 1mf 16V	1515-0010-002
C416	SM1000pf 5% 50V	1507-0102-004
C417	SM1000pf 5% 50V	1507-0102-004
C418	Tant 1mf 20% 15V	1515-0010-003
C419	Tant 1mf 20% 15V	1515-0010-003
C420	CD .001mf +8-2 50V	1503-0102-003
C421	CD 10pf 10% 500V NPO	1501-0100-001
C422	CD .001mf +8-2 50V	1503-0102-003
C423	CD .001mf +8-2 50V	1503-0102-003
C424	CD .001mf 50V Z5U	1503-0102-003
C425	TC 0.1mf 20% 50V	1539-0104-706
IC401	Two Tone osc SC74204	3130-6060-700
IC402	Two Tone osc SC74204	3130-6060-700
IC403	Two Tone Dg. Fil SC74203	3130-6062-000
IC404	LM358N	3130-3167-909
DIODES		
CR401	diode sil IN4148	4805-1241-200
CR402	diode sil IN4148	4805-1241-200
CR403	diode germ	4807-1233-900
CR404	diode germ	4807-1233-900
CR405	diode germ	4807-1233-900
CR406	diode germ	4807-1233-900
CR407	diode sil IN4148	4805-1241-200
TRANSISTORS		
Q401	Blu Top SPS1476	4801-0000-003
Q402	Blu Top SPS1476	4801-0000-003
Q403	SPS-952-2	4801-0000-016
Q404	SPS-952-2	4801-0000-016
RESISTORS		
R501	470 ohm ½W 5%	4701-0471-034
R502	res var 5K	4752-5135-302
R503	res var 7.5K	4752-5135-307
SWITCHES		
SW501	sw slide	5113-5135-203
SW502	sw slide	5113-5135-203
SW503	sw slide SPDT	5113-3231-601
SW504	sw slide SPDT	5113-3231-601
SW505	sw SPDT	5113-3231-501



MA 317 CONNECTION POINTS
TO
MAIN BOARD MCA 611A



MA 345 CONNECTION POINTS
TO
MAIN BOARD MCA 611 A